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No. ~~958~~

IN THE

Supreme Court of the United States

OCTOBER TERM, 1970

No. ~~958~~ 70-38

FEDERAL POWER COMMISSION, *Petitioner*

v.

FLORIDA POWER & LIGHT COMPANY, *Respondent*

On Writ of Certiorari to the United States Court of Appeals for the Fifth Circuit

MOTION OF AMERICAN PUBLIC POWER ASSOCIATION FOR LEAVE TO FILE BRIEF AMICUS CURIAE ON THE MERITS, AND BRIEF

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MOTION OF AMERICAN PUBLIC POWER ASSOCIATION FOR LEAVE TO FILE BRIEF AMICUS CURIAE, ON THE MERITS

The American Public Power Association respectfully moves this Court for leave to file the accompanying brief on the merits in this case as amicus curiae in support of the Solicitor General on behalf of the Federal Power Commission. The attorneys for the petitioner have consented to the filing of this brief but the attorneys for the respondent, Florida Power & Light Company (FPL), have refused consent.

The applicant was granted leave to file a brief as amicus curiae in support of the Solicitor General's petition for certiorari, and did so. The present application is submitted on the same grounds.

The applicant, American Public Power Association (APPA), a national service organization, has an interest in this case in that it represents more than 1,400 local, publicly owned electric utilities in 49 states, Puerto Rico, the Virgin Islands and Guam. Many of these publicly owned utilities are directly and seriously affected by the decision in the court below.

The basic issue presented in the case is whether the interconnection of an electric power utility with an interstate transmission grid involved "transmission of electric energy in interstate commerce," thus subjecting the utility to the Commission's regulatory jurisdiction pursuant to Section 201 of the Federal Power Act, 16 U.S.C. § 824.

In finding that FPL's interconnection with an interstate transmission grid involved the interconnecting utility in interstate commerce, the Commission relied upon the "electromagnetic unity of response" theory and the "commingled tracing" theory. The court below overturned the Commission's determination, rejecting the Commission's exercise of its expertise, and held FPL to be free of the Commission's jurisdiction. In short, FPL's election to participate in an interstate power pool, to obtain the benefit of reserve generating capacity in power systems in other states, in consideration of its dedicating reserve capacity on its own system for use in those other states, was held to have no consequence with respect to interstate commerce, that is, interstate transmission of energy.

Florida Power & Light Company v. *Federal Power Commission*, 430 F.2d 1377 (5th Cir. 1970).

The decision below leaves the Commission with no adequate basis for ascertaining the scope of its own jurisdiction as the lower court rejected the Commission's "engineering and scientific" tests for determining jurisdiction over utilities. Such uncertainty would severely jeopardize the Commission's ability to regulate sales at wholesale of interest power and to order, under appropriate circumstances, interconnections between utilities.

The Commission's power to compel necessary interconnections under Section 202(b) of the Act (16 U.S.C. § 824a(b), and its jurisdiction under Sections 205 (16 U.S.C. § 824d) and 206 (16 U.S.C. § 824e) over sales at wholesale by private companies to the public power systems with which they are interconnected, are absolutely vital for the survival of many of the dispersed, publicly owned utility systems which meet an important portion of the Nation's electric needs. Most of these systems are members of the American Public Power Association.

The American Public Power Association respectfully requests this Court to grant permission to file the annexed brief amicus curiae.

Respectfully submitted,

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BRIEF OF THE AMERICAN PUBLIC POWER ASSOCIATION, AS AMICUS CURIAE, ON THE MERITS

INTEREST OF THIS AMICUS CURIAE

American Public Power Association (A.P.P.A.) is a national service organization consisting of, and serving, local consumer-owned electric utilities—that is, utilities owned by political subdivisions of states, such as municipalities, districts, and cooperatives. In 1970 there were 2,942 consumer-owned utilities in the United States, and A.P.P.A. represented about half of them, some 1,400, in 49 states. Consumer-owned utilities in 1971 accounted for about 12.4 percent of the country's installed generating capacity, and served about 22.1

percent of the Nation's power customers, consuming about 18.8 percent of the electric energy sold to ultimate customers.[1]

An important fact which characterizes the consumer-owned utilities is that most of them are dependent upon interconnections with privately owned utilities for their power supply, lacking generating capacity of their own to satisfy the needs of their consumers.

The Federal Power Commission has reported,[2] for the latest year (1968) for which its statistics are available, that private utilities furnished the total requirements of 683 municipalities and 318 cooperatives, and furnished partial requirements of 203 municipalities and 202 cooperatives.

This dependence of consumer-owned utilities on interconnection with the much larger privately owned utilities which surround them is the reason for the life-and-death importance of this case to many of these systems and the consumers dependent upon them.

The Commission's jurisdiction in the present case[3] is dependent upon a determination that the Company is a "public utility" under Section 201(e) of the Federal Power Act (16 U.S.C. § 824(e)). If so, a whole train of jurisdictional powers attaches including two that are essential to the survival of small public systems dependent upon power from outside sources: the Commission's power to compel interconnections under

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[1] Public Power, Jan.-Feb. 1971 at 18.

[2] FPC, Sales of Firm Electric Power for Resale, 1965-1968, by private electric utilities, Table A at 2-3 (1970).

[3] The issue in the present case is the Commission's power to require the Company to keep its accounts in accordance with the Commission's uniform system of accounting (Sec. 301(a), 16 U.S.C. § 825(a)).

Section 202(b) (16 U.S.C. § 824a(b)), and its power to effectuate reasonable and non-discriminatory rates under Sections 205 (16 U.S.C. § 824d) and 206 (16 U.S.C. § 824e).[4]

[4] There are, of course, many other salutary elements of Commission jurisdiction, if the Company in question is found to be a public utility. These include statutory prohibitions of issuance of securities without Commission approval and of capitalization of any franchise or contract in excess of the amount actually paid for it (Sec. 204, 16 U.S.C. § 824c), power to determine the adequacy of interstate service (Sec. 207, 16 U.S.C. § 824f), to investigate and ascertain the actual legitimate cost of the property, and depreciation thereon (Sec. 208, 16 U.S.C. § 824g). Beyond this, the applicability of many provisions of Part III of the Act to a power company hinges on whether it is a public utility within the meaning of Sec. 201(e), 16 U.S.C. § 824(e) (or a licensee under Part I of the Act). These provisions relate to access of the Commission to the utility's books (Sec. 301(b), 16 U.S.C. § 825(b)); authority to the Commission to fix depreciation rates (Sec. 302, 16 U.S.C. § 825a); requirements that utilities file annual reports with the Commission (Sec. 304, 16 U.S.C. § 825c); prohibition against utility officers and directors dealing in securities of their companies (Sec. 305(a), 16 U.S.C. § 824d(a)); prohibition of interlocking directorates as between utilities and banks, security underwriters, etc. (Sec. 305(b), 16 U.S.C. § 824d(b)); authority to the Commission to hear and investigate complaints of violation of the Act (Sec. 306, 16 U.S.C. § 825e); authority to the Commission to make investigations, compel the production of books, and require the attendance of witnesses (Sec. 307, 16 U.S.C. § 825f); to hold hearings (Sec. 308, 16 U.S.C. § 825g); to prescribe orders, rules and regulations (Sec. 309, 16 U.S.C. § 825h). The applicability of other sections of the Act is indirectly but importantly affected by the Company's status as a public utility, *e.g.*, authority to the Commission to bring suit in federal courts to enforce the Act or enjoin its violation (Sec. 314, 16 U.S.C. § 825m); provisions for forfeitures and penalties for violation of the Commission's orders (Secs. 315, 316, 16 U.S.C. §§ 825n, 825o); provisions establishing jurisdiction of federal courts of suits to enforce the Act (Sec. 317, 16 U.S.C. § 825p); provisions for resolution of conflicts of jurisdiction between the Federal Power Commission and the Securities and Exchange Commission (Sec. 318, 16 U.S.C. § 825q).

QUESTION PRESENTED

We agree with the Solicitor General's statement of the question presented, in his Petition for Certiorari. This reads:

> "Whether the Federal Power Commission properly determined that the interconnection of an electric power utility with an interstate transmission grid involved 'transmission of electric energy in interstate commerce' and thus made the utility subject to the Commission's regulatory jurisdiction."

We support each of the Solicitor General's arguments that this question should be answered in the affirmative.

This amicus is primarily affected by the Commission's determination that the interconnection of transmission systems in an interstate grid, interlocking all interconnected generators in all states electromagnetically, inevitably occasions interstate transmission of energy throughout such a grid because of the electromagnetic unity of response of all of the interconnected generators in all states to the whole interconnected load in all states, without the necessity for (indeed, without the possibility of) tracing the flow of energy from a particular generator to a particular customer, and by the error of the court below in rejecting that engineering determination as a basis for the Commission's jurisdiction. Our argument will be directed to that issue. We support, but do not argue, the alternative ground that energy from out of state was actually traced to Florida Power & Light Co.'s system, and traced also from that system to points outside the state.

It should be noted that the issue here is whether the Company is a public utility within the meaning of Section 201(e),[5] not the narrower question of whether a particular sale by this utility is a sale in interstate commerce within the meaning of Section 205.[6] By virtue of cross-reference of Section 201(e) to Section 201(b), 16 U.S.C. § 824(b), a company which owns or operates *either* facilities for (1) transmission of electric energy in interstate commerce, *or* (2) sale of electric energy in interstate commerce, is a public utility. This case concerns the first alternative.

STATEMENT OF THE CASE

We think it important that the Court have before it the exceptionally lucid explanation of the Presiding Examiner of just how an interstate transmission grid, such as that with which Florida Power & Light Co. is interconnected, functions. We reprint extracts from his decision below, and adopt them as our statement of facts. The Examiner said (App. 255):

> "Florida Power & Light Company (Florida) engages in the generation, transmission, and distribution at wholesale and retail of electric energy throughout major portions of Florida. The essential issue in this case is whether Florida is a public utility—whether the Commission has jurisdiction over it under Section 201 of the Federal Power Act. This depends on whether Florida operates facilities for the transmission of electric energy in interstate commerce.

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[5] *Cf.* Jersey Central Power & Light Co. v. FPC, 319 U.S. 61 (1943).

[6] *Cf.* FPC v. Southern California Edison Co., 376 U.S. 205 (1964).

"If the Commission has jurisdiction over Florida, Florida is required to maintain its accounts according to the Commission's Uniform System of Accounts; therefore, whether Florida should so maintain its accounts is in issue in this proceeding. But there is not in issue in this proceeding any rate matter. However, if Florida is found to be a public utility, the Commission would have jurisdiction in other proceedings with respect to the rates of such of its sales for resale which are in interstate commerce, and also with respect to compelling its physical interconnection with other systems. But decisions on these matters are not in issue in this proceeding.

* * * *

(App. 255-56):

"The first and indeed the major question in this proceeding is: Does Florida transmit interstate electric energy? There are many significant factors which bear on this issue, but these two are major:

"(1) Florida is interconnected with Florida Power Corporation (Corp), another Florida electric utility company. Substantial amounts of electric power are interchanged between Florida and Corp.

"(2) Corp is interconnected with Georgia Power Company (Georgia), which operates in Georgia. Substantial amounts of power are interchanged between Corp and Georgia.

"So the question becomes: Is electric energy transmitted between Georgia and Florida via Corp?

* * * *

(App. 257):

"Florida has relationships and is interconnected with four other Florida electric systems, Corp,

Tampa Electric Company (Tampa), Orlando Utilities Commission (Orlando), and the City of Jacksonville (Jacksonville).

"Florida, Corp and Tampa form the Florida Operating Committee with Jacksonville and Orlando as associate members.

* * * *

(App. 260):

"Corp is interconnected with Florida as well as two other members of the Florida Operating Committee, Tampa and Orlando. Corp is also interconnected with Georgia. Thus Corp is interconnected with Florida on the south and with Georgia on the north.

"Georgia is a subsidiary of The Southern Company (Southern), a holding company whose other subsidiaries are Gulf Power Company (Gulf) which operates in northwestern Florida, Alabama Power Company (Alabama), and Mississippi Power Company. Corp is interconnected with Gulf, and Gulf is interconnected with Georgia and Alabama. Pursuant to an agreement between the subsidiaries of Southern, on the one hand, and Corp, on the other, during the summer Corp makes available 100,000 kw to the Southern subsidiaries and during the winter the Southern subsidiaries make available to Corp 100,000 kw.

* * * *

(App. 260-61):

"Georgia is also interconnected with Duke Power Company, Tennessee Valley Authority, Southeastern Power Administration and others. These systems operate in states beyond Georgia.

* * * *

(App. 261):

"Florida and the other members of the Florida Operating Committee are members of a multi-state electric network, the Southeast Region of the Interconnected Systems Group (ISG)[7] which covers the southeastern and central portions of the country. Florida operates in synchronism with the 140 members of ISG and is ready to assist them or to receive assistance from them in case of emergency. Thus during a 580 mw generator loss by a midwestern utility Florida contributed 8 mw to ISG.

"Electric energy transmitted between Corp and Georgia passes through Fort White, a point at the northern part of Corp's system. If power flow exceeds 100 mw at this point the ties open, cutting off the power. Hence assistance between Florida and ISG via the Corp-Georgia interconnection cannot be relied on where the need exceeds 100 mw. However 12 of Florida's 24 generating units generate 75 mw or less. An outage of any of these units would lead to almost instant ISG assistance to Florida. However, no such limitation appears applicable to assistance from ISG via the Florida-Corp-Gulf-Georgia interconnections.

* * * *

(App. 262-63):

"Electric power on Florida, Corp, and Georgia and all other interconnected systems is supplied as

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[7] Our note: The Interconnected Systems Group has been described in Arkansas Power & Light Co. v. FPC, 368 F.2d 376, 378 (8th Cir. 1966); Public Service Co. of Indiana v. FPC, 375 F.2d 100, 102 (7th Cir.), *cert. denied*, 387 U.S. 931 (1967), and Cincinnati Gas & Elec. Co. v. FPC, 376 F.2d 506, 508 (6th Cir.), *cert. denied*, 389 U.S. 842 (1967). The latter described it as "consisting of one hundred forty utility systems, in thirty-two states. The System forms a pool of multi-state energy which supplied the load of CG&E in synchronism with the other connected utilities." 376 F.2d at 508.

alternating current at a frequency of 60 cycles. Interconnected synchronous operation, or 'parallel operation,' as the term is used in the industry, requires that the frequency of each system be in synchronism with that of all others in the interconnection. Two or more electric systems cannot (except under special and rare conditions) operate together unless they are in synchronism. This means that the current pulses on these systems, and thus the frequency, coincide exactly; not approximately, but exactly. Birmingham is served by Alabama which is interconnected with Georgia which is interconnected with Corp. Miami is served by Florida which is interconnected with Corp. The frequency of the pulses is exactly the same in Miami and Birmingham, and if it changes to a new value in Birmingham, then it changes to exactly that same value in Miami. The speed of every electric generator on every electric system in an interconnected group is irrevocably locked to the same frequency. A variation in one affects all.

"The line bias with frequency control[8] is the technique used to maintain frequency at 60 cycles on interconnected electric systems operating in synchronism, such as Florida, Corp and Georgia, and is also used to match generation with net system load. Bias is the automatic shift of a system's interchange schedule with frequency. The basic function of modern frequency and tie line control is that of regulating total generating output in each individual system or control area in such a way that the total generation will match continuously and as closely as possible the total system load, including scheduled load on interconnection ties.

"Frequency never remains at 60 cycles—it is always a bit above or a bit below; because the loads

[8] Our note: "Tie line bias," and "frequency control" are also explained in Arkansas Power & Light Co. v. FPC, 368 F.2d 376, 378 (8th Cir. 1966).

are always fluctuating and the generation follows to keep the system load and generation in balance and as close to 60 cycles as possible. Although deviations in frequency almost always occur due to the impossibility of matching instantaneous load variations with rapid changes in generation, it is important for system operation to keep these frequency deviations as small as possible.

* * * *

(App. 263-68):

"Each generating unit when operating at a speed corresponding to 60 cycles has mechanical energy of rotation stored in its rotating components which is automatically convertible to electric energy when there is a decrease in frequency and a corresponding drop in revolutions per minute. When a load is added suddenly to an electric system or a generator is taken suddenly out of service, assuming no other changes occur, every generating unit operating on the Florida system and all connected systems almost instantly experience a loss in speed, so that the mechanical energy of rotation of every generator is converted to electric energy. The sum total of the electric energy so obtained through the conversion of mechanical energy of rotation supplies part of the new load or takes the place of some of the lost generation. Thus every connected generator on the entire interconnected system contributes energy to the interconnected system to supply part of the additional load and so maintain the balance between total system generation and total system load. Following this initial reaction, the governor on each generator reacts in accordance with its sensitivity, rate of response, and position in relation to its 'dead band' (the area within which a governor will not respond to a change in load), causing additional steam to be applied to the turbines and to speed up the generators thus producing more energy, which in turn

increases the speed of all generators, bringing frequency back to normal. As these events occur, the tie line bias of all the systems is operating so that the net interchange of each system with its neighbors will tend to return to the former prearranged level. Because of the tie line bias of each system, the particular system on which the increase actually occurred will eventually increase generation to supply the additional load and the other systems will correspondingly reduce their temporarily increased electric generation.

"Changes in load at various points on all systems are constantly occurring, producing changes in frequency throughout all interconnected systems. The resulting changes in generation of electric energy throughout the interconnected systems reduce the range of the changes in frequency and thus improve the efficiency of operation of the interconnected systems. Thus unnecessary speed-up or slow-down in generating equipment is minimized; clocks keep more perfect time; precision industrial operations are improved; and oscillations between generators are reduced. This is accomplished by the dispersal of the immediate effects of load changes throughout the electromagnetically interlocked generators of the interconnected systems. One of the reasons for the interconnection of systems is the ability of such systems to promote stability in generation and frequency by dispersing the effects of load changes throughout larger systems. These effects result in a constant swapping and redistribution of loads borne by the various generators throughout interconnected systems.

"These changes are worked through quickly. But they occur. And they occur continuously and frequently.

"Thus the modern electric system, such as that of Florida and the systems with which it is inter-

connected, is an ever varying one; loads and generation are constantly varying from moment to moment as lights are switched on and off and as workmen increase or decrease the power in the machines they use in myriad operations.

"For any particular loading on an electric system or interconnected set of systems all of the electric energy produced by all the generating units is delivered to the common coordinated and integrated modern transmission system from which all of the customers are supplied. Variations in load at any point cause changes throughout the interconnected electric systems because of the interdependence of the generating sources. All generating units connected to a common network experience the same changes in frequency and all clocks connected to such a network experience these changes in frequency and maintain the same time.

"No attempt is made to control flows in individual lines because the electric energy flows are determined by the electric characteristics of the network. Only the net of flows over all interconnections on a system is controlled by increasing or decreasing generation so as to maintain interconnection schedules and to maintain frequency as closely as possible at 60 cycles. The changes in generation are in response to changes in load and the effects of tie line bias on all the interconnected systems.

"The electrical and other characteristics of an electrical network affect the transfers of electric power and energy at points of connection with other interconnected electric systems. The moment to moment distribution of electric power and energy in an electric network is determined automatically by (1) the electric characteristics, namely, resistance, inductive reactance and capacitative reactance of the electric lines and electric

facilities; (2) the locations and power outputs of generating units in operation; and (3) the locations of and amounts of power taken by the electric loads. The electric loads on an electric system vary from moment to moment and so does the total generation. Consequently, the transfers of electric power at points of connection of Florida with other interconnected electric systems vary from moment to moment.

"Electric systems, such as Florida, Corp, Georgia, and others normally have no control over the actual transfers of electric power and energy over any particular transmission interconnection with another electric system if there is more than one interconnection. Similarly electric utilities, such as Florida, Corp, Georgia, and others, normally have no control over the actual transfers of electric power and energy with any particular electric system if there are interconnections with two or more electric systems, which are also directly or indirectly connected. In each instance this is due to the free flow characteristics of the electric networks. All that is normally controlled by each system is the net of flows over all its interconnections which is brought about through the effects of tie line bias, frequency changes, governor reactions and generator responses thereto.

"Thus there is a free flow of power and energy throughout the electric network in which Corp and Georgia participate. There is also a free flow of power and energy throughout the electric network formed by Corp and Florida. And there is a free flow of energy among Georgia, Corp, and Florida.

"All 140 members of the ISG operate in parallel. All are interlocked electromagnetically and maintain the same frequency. Each member renders automatic assistance to the other in times of emergency. As previously noted, Florida can receive from or contribute to ISG up to 100 mw. The net-

work formed by all the members of ISG and the tie line bias and frequency control used by member systems provide mutual assistance in maintaining standard 60-cycle frequency, thereby improving the efficiency of operation of all.

"Electric systems operating together on an interconnected basis, such as Florida, Corp and Georgia, schedule the amounts of power and energy transactions among themselves on an hour-to-hour basis and each sets on its own net interchange controller the net amount of scheduled transactions. Each system measures the actual transfers at each point of connection with another electric system and the differences between scheduled transactions and actual transfers are balanced out as soon as practical. In order that the technique may work efficiently all interconnected systems must do their share in adhering to schedules as closely as possible.

"In actuality there are substantial differences between the scheduled and actual transactions. The reason is that none of the connected electric systems including that of Florida, Corp, and Georgia has any control over the actual transfers of power at each point of interconnection because of the free flow characteristics of electric networks. All that can be controlled on each system having more than one interconnection with other electric systems is the net of transfers into or out of its own system or area. This is particularly so with respect to the electric system of Florida because some of the electric systems to which it is connected have connections among themselves.

* * * *

(App. 268-70):

"The electric systems of Florida and all other interconnected systems are essentially alike as to electrical, electromagnetic and electromechanical

characteristics. Because they are alike, it is possible to have presently existing interconnected operations on a very large scale, extending from the Rocky Mountains to the Atlantic Ocean and from the Canadian to the Mexican border.

"For all practical purposes electric energy in the form of alternating current is generated as needed because it cannot be stored in electrical form. At any point in time such electric energy is delivered where needed on a system at a speed of about 186,000 miles per second. An interconnected electric system such as that of Florida, Corp, Georgia, and the others to which it is interconnected, automatically requires at constant frequency that at every moment total generation always be equal to total load plus losses; otherwise, there is an unbalance causing a change in frequency. An electric system cannot supply one connected load and not supply another connected load. For any particular loading on an electric system, all of the electric energy produced by all of the generating units is delivered to the common transmission network which acts as a single unit from which all of the customers are supplied. For any change in load or generation, there is an electrical effect through a change in voltage and current at all generators and at all loads.

"If a housewife in Atlanta on the Georgia system turns on a light, every generator on Florida's system almost instantly is caused to produce some quantity of additional electric energy which serves to maintain the balance in the interconnected system between generation and load. If sensitive enough instruments were available and were to be placed throughout Florida's system the increase in generation by every generator on Florida could be precisely measured.

"Nobody can say for certain just how electricity is really transmitted. The analogy to a flow of

water is metaphorical only. Does an electron move from one end of a thousand mile wire to another? Or is there only interaction between neighboring electrons or between fields of force? The answer is not important for legal purposes. The significant factors are that Florida's generators are interlocked electromagnetically with Georgia's and that in consequence, Florida's generators increase their production of electric energy almost instantaneously and automatically in response to increases in load on Georgia's system thereby contributing in some measure to the system supply which meets the increased Georgia load, reducing the variation in frequency on the Georgia system, and increasing its efficiency of operation. Without the Florida response the electric reactions on Georgia and the interconnected systems would be different.

* * * *

(App. 281):

"Another aspect of the interconnection problem concerns Florida's participation in ISG and its interconnection with 140 electric utility systems throughout the southern and central United States. All these systems operate in parallel and are interlocked electromagnetically. All are interdependent to some extent. The Northeast Power Failure of 1965 suggests the reach of such interdependence. It is expedient that FPC's exercise of jurisdiction which it is otherwise found to possess under the Act be in consonance with the reach and realities of modern interconnected electric systems."

The Commission found (App. 288-89):

"The testimony and evidence of record support the Examiner's findings that the electric power on all the interconnected systems in which FPL, Corp, and Georgia participate is supplied as alternating current at a frequency of 60 cycles; that the fre-

quency of each system is in synchronism with that of all the others in the interconnection; that there is a tie-line bias with frequency control on the interconnected system which permits a free flow of power and energy throughout the networks in which FPL, Corp, and Georgia participate; that all 140 members of the ISG operate in parallel and are interlocked electromagnetically; and that FPL can receive from or contribute to ISG up to 100 mw. The record further supports the Examiner's findings that FPL normally has no control over the actual transfers of electric power and energy with any particular electric system with which it is interconnected; that since electric energy can be delivered virtually instaneously when needed on a system at a speed of 186,000 miles per second, such energy can be and is transmitted to FPL when needed from out-of-state generators, and in turn can be and is transmitted from FPL to help meet out-of-state demands; and finally, that there is a cause and effect relationship in electric energy occurring throughout every generator and point on the FPL, Corp, Georgia, and Southern systems which constitutes interstate transmission of electric energy by, to, and from FPL.

"In its exceptions FPL argues that there is no substantial record support for the Examiner's finding that it is engaged in the transmission of electric energy in interstate commerce. We find no merit in this argument. The Examiner concluded that the operation of FPL in electromagnetic unity with the suppliers in and outside of Florida in and of itself demonstrated that it owned and operated facilities for the interstate transmission of electric energy. This finding is also supported by the evidence produced by staff at the hearing which convincingly establishes that electric energy is transmitted in interstate commerce to and from FPL's lines. The nature of staff's showing is fully consistent with, and satisfies the tests which we have established in numerous opinions issued in the last

> two years to support a finding that wholesale sales are in interstate commerce."

These findings of fact should be dispositive of the case. Section 313(b), 16 U.S.C. § 825*l*, directs: "The findings of the Commission as to the facts, if supported by substantial evidence, shall be conclusive."

The court below declined to give effect to these findings, saying (App. 364):

> "We conclude that the complex relationship of cause and effect in interconnected and synchronized systems is, as to FPL, not sufficient to prove the actual transmission of energy interstate. It tells us what, as to that company, could occur. It does not tell us with any substantial degree of certainty what does occur."

But the court seems to have given equally short shrift to the Company's theory, which it called the "steady state method."

The court said (App. 367): "Both suffer from the same vice of creating a construct which departs from the actual manner in which electricity operates and then attempting to trace the consequences."

But the court never tells us what its own "construct" is. It leaves the Commission and the industry without any understandable criterion of what proof is needed to establish that transmission facilities are used for transmission of electric energy in interstate commerce.

SUMMARY OF ARGUMENT

The Presiding Examiner and the Commission, in the exercise of their expert judgment, accurately determined that the generation and transmission facilities of Florida Power & Light Co. are interlocked electro-

magnetically with those of some 140 power systems, operating synchronously in parallel with them, so that the change in loads in any of these systems affects the operation of the generators in all systems, and thus energy flows automatically across state lines. In effect, all of the generators in all states so interconnected become a single machine. All facilities which effectuate this instantaneous, automatic "electromagnetic unity of response" on all generators in all states so interconnected are facilities for the transmission of electric energy in interstate commerce, within the meaning of Section 201(b) of the Federal Power Act. Consequently, any company which owns or operates any segment of the transmission facilities which unitize all generating capacity in all states is thus a "public utility" within the meaning of Section 201(e), of the Act, even though the segment of such transmission facilities owned by a particular company is located within a single state.

The functioning of each of the facilities so integrated interstate is outside the scope of the regulatory power of any single state.

The decision below, which rejected the engineering hypothesis of both the Commission and the Company, would recreate the "Attleboro Gap," by (1) denying jurisdiction to the Federal Power Commission with respect to facilities which are beyond the power of any state to regulate, and (2) conditioning the Commission's jurisdiction on tracing energy from a specific generator, which feeds into an interstate transmission grid, to a specific customer. The task is engineeringly impossible and legally unnecessary.

ARGUMENT

I. THE JURISDICTIONAL TEST OF SECTION 201(b) OF THE ACT IS MET BY PROOF THAT TRANSMISSION FACILITIES IN TWO OR MORE STATES ARE INTERCONNECTED, AND OPERATING IN SYNCHRONISM, HENCE SUBJECT TO ELECTROMAGNETIC UNITY OF RESPONSE OF THE GENERATORS IN ONE STATE TO THE LOAD ON THE INTERCONNECTED SYSTEM IN ANOTHER STATE.

A. Interstate transmission of electric energy automatically and inevitably takes place between such systems.

As the Presiding Examiner put it in his decision (App. 270):

> "The cause and effect relationship in electric energy occurring throughout every generator and point on the Georgia, Corp and Florida systems constitutes interstate transmission of electric energy by, to, and from Florida. It is the electromagnetic unity of response of Florida, Corp, Georgia and other interconnecting systems that constitutes the interstate transmission of electric energy by Florida."

The concurrent findings of the Presiding Examiner (App. 281-82) and the Commission (App. 299-300) on this point are not only persuasive in their exposition of the facts, they are conclusive as a matter of law. Federal Power Act § 313(b), 16 U.S.C. § 825*l*(b) (1964).

As to related questions of law, the experienced judgment of the Commission, in its interpretation of the statute as applied to the highly technical factual problem involved here, must be given great weight. *SEC* v. *New England Electric System,* 384 U.S. 176 (1966); *Atlantic Refining Co.* v. *FTC,* 381 U.S. 357 (1955); *Gray* v. *Powell,* 314 U.S. 402 (1941).

B. The Company's public utility status is established by its ownership of facilities for transmission of energy in interstate commerce. That being so, it is not necessary to establish that it is also selling energy in interstate commerce.

Section 201(b) directs that the provisions of Part II of the Act apply, in the disjunctive, to (1) transmission of electric energy in interstate commerce, and (2) the sale of electric energy at wholesale in interstate commerce. Unless Section 313(b) is ignored and rejected, it necessarily follows as a matter of law from the Commission's findings of fact that Florida Power & Light Co. is indeed a public utility within the meaning of Section 201(e), because it owns or operates facilities for the transmission of electric energy in interstate commerce. Ownership of facilities for such transmission is enough to require an affirmative answer to the jurisdictional question. The only question involved here is whether the Company is a public utility within the meaning of Section 201(e). As the Examiner pointed out (App. 255), we are not concerned here as to whether a particular sale is a sale of energy in interstate commerce, and, therefore, we are not concerned with the question of whether, to prove that a particular sale to a particular customer is one in interstate commerce, it is necessary to trace energy from out-of-state to that customer. We think that it is not, but this case does not require an answer to that problem.

The court in *Hartford Electric Light Co.* v. *FPC*, 131 F.2d 953 (2d Cir. 1942), *cert. denied*, 319 U.S. 741 (1943), reasoned that: "Section 201(b) confers jurisdiction over not only facilities (1) for interstate *transmission* but also—and *disjunctively*—over facilities (2) for interstate wholesale *sales.*" 131 F.2d at 961.

If Florida is a public utility in consequence of its interconnection with an interstate power grid, i.e., because it owns facilities for interstate transmission, the question of the quantity of energy which may pass in either direction is quite immaterial. *Connecticut Light & Power Co.* v. *FPC*, 324 U.S. 515 (1945); *Wisconsin-Michigan Power Co.* v. *FPC*, 197 F.2d 472 (7th Cir. 1952), *cert. denied*, 345 U.S. 934 (1953).

As the Court said in *Connecticut:*

> "We do not find that Congress has conditioned the jurisdiction of the Commission upon any particular volume or proportion of interstate energy involved, and we do not think it would be appropriate to supply such a jurisdictional limitation by implication." 324 U.S. at 536.

It cannot be seriously contended that Florida's lines which interconnect its system with Corps' (which in turn is interconnected with the 140 systems in 32 states in the Interconnected Systems Group) are facilities engaged solely in "local distribution or only for the transmission of electric energy in intrastate commerce," within the proviso to Section 201(b). *Cf. Wisconsin-Michigan Power Co.* v. *FPC*, 197 F.2d 472, 477 (7th Cir. 1952), *cert. denied*, 345 U.S. 934 (1953); *FPC* v. *Arizona Edison Co.*, 194 F.2d 679, 681 (9th Cir. 1952).

C. The decision below is contrary to decisions of this Court and of other Circuit Courts of Appeals.

The question of whether a company which owned and operated transmission facilities as part of an interstate pool was a public utility under Section 201(e) came before this Court in *Jersey Central Power & Light Co.* v. *FPC*, 319 U.S. 61 (1943). The factual situation was

comparable to that in the present case. Jersey Central owned a transmission line from its substation adjacent to its generating plant in New Jersey. The line extended to a point in New Jersey where it joined the transmission facilities of a company (Public Service) not involved in the case. This latter company owned transmission facilities extending to midchannel between New Jersey and New York. At that point, Staten Island Edison Corporation, another utility, connected with its transmission system in New York. The Commission found that energy generated in New Jersey by Jersey Central was consumed in New York and that energy generated in New York was consumed in New Jersey. It held that Jersey Central was a public utility under the Federal Power Act. The Supreme Court said:

> "The connection between Public Service and Staten Island is maintained primarily to guard the Staten Island distribution against breakdown. It is used for emergencies a few times per year on an average. Surplus energy is occasionally sold. The rest of the time the line is maintained 'in balance.' This is to avoid a delay of transmission in an emergency. If the connection were not maintained, an appreciable time would be lost in communicating and re-establishing the connection. Any oscillation of the balance, created by increased demand in New York or New Jersey, carries energy in one direction or in another to be consumed on one side or the other of the line between the states. This is called 'slop-over' energy." 319 U.S. at 65.
>
> * * * *
>
> "The amount of energy transmitted was small. The evidence was developed from 184 log readings selected from 25,000. Of the 184 log readings, 12

showed this flow of energy from Jersey Central to New York between August 26, 1935, . . . and March 14, 1938, the date of the present purchase of the stock. Twelve showed such flow shortly after the purchase.

"This evidence, we think, furnishes substantial basis for the conclusion of the Commission that facilities of Jersey Central are utilized for the transmission of electric energy across state lines." *Id.* at 66-67.

The Court, in a footnote, quoted Section 313(b): "The findings of the Commission as to the facts, if supported by substantial evidence, shall be conclusive." 319 U.S. at 67, n. 5.

In *Pennsylvania Water & Power Co.* v. *FPC,* 343 U.S. 414 (1952), as here, the question was whether the company was a public utility, not whether a particular sale was one in interstate commerce. The Commission found that it, with two other companies, was party to an agreement under which: "A complete integration and pooling of the power producing and transmitting facilities of the three companies was thus achieved." 343 U.S. at 419-20. The Court continued, quoting from the Commission's opinion:

"It is accordingly evident that the operations of the unified system enterprise are completely interstate in character, notwithstanding the fact that system energy transactions at some particular times may involve energy never crossing the State boundary." 343 U.S. at 420.

On these facts, said the Court:

"We hold that the Federal Power Commission has complete authority to regulate all of this commingled power flow. The Commission's power

does not vary with the rise and fall of the Susquehanna River." *Id.*

* * * *

"Moreover, the Commission found here ready-made by prior contractual arrangements a regional coordination of power facilities of precisely the type which the Commission is authorized to require under § 202." *Id.* at 423.

In *Connecticut Light & Power Co.* v. *FPC*, 324 U.S. 515 (1945), the Court said that the company, which had operated as a member of an interstate pool which interchanged energy among certain systems in New York, Massachusetts and Connecticut, had "rearranged its operations with intent to cut every connection and discontinue every facility whose continued operation would render it subject to the Federal Power Commission's control," and had succeeded in that objective. 324 U.S. at 518. But, the Court said: "[H]ad such operation continued, the Company would be subject to the Act and to the Commission's order." *Id.* The Court continued: "The order must stand or fall on whether this company owned facilities that were used in transmission of interstate power and were not facilities used in local distribution." *Id.* at 531.

We have taken care to point out that the question in this case is whether the Company is a public utility within the meaning of Section 201(e), not whether a particular sale is a sale in interstate commerce within the meaning of Section 205. The Company's "status as a public utility does not decide the question whether the F.P.C. may assert jurisdiction over the rates" of a particular sale by the Company. *FPC* v. *Southern California Edison Co.*, 376 U.S. 205, 208 n. 3 (1964), citing *Connecticut Light & Power Co.* v. *FPC*, 324 U.S.

515 (1945). A particular sale by a public utility may not be a sale of energy in interstate commerce.

But the converse is not true. If a sale of energy is held to be a sale in interstate commerce, it follows automatically, by the terms of Section 201(b), that the Company is a public utility within the meaning of Section 201(e).[9] For that reason, a group of cases relating to power sales from interstate pools is in point.

In *Pennsylvania Water & Power Co.* v. *FPC,* 193 F. 2d 230 (D.C. Cir. 1951) *aff'd* 343 U.S. 414 (1952), the Court of Appeals said: "Each sale is in effect a pool sale from the integrated system and hence interstate in nature." 193 F.2d at 241.

In *Indiana & Michigan Electric Co.* v. *FPC,* 365 F.2d 180 (7th Cir.), *cert. denied,* 385 U.S. 972 (1966), the Court of Appeals sustained the Commission's order which required the company to file rate schedules covering sales to certain municipal electric systems and cooperatives, all in Indiana. The question was whether these were sales in interstate commerce. The court found that the company, with five others, "is an integral part of the American Electric Power System (AEP), a single coordinated power system operating as an integrated unit in Michigan, Indiana, Ohio, Kentucky, West Virginia, Virginia, and Tennessee, with generating facilities combined by an inter-connected transmission grid." 365 F.2d at 181-82.

The court said: "We think the Commission was justified in holding that the important consideration in determining jurisdiction here is the integrated inter-

[9] The exotic question of whether a company can be a public utility with respect to some of its operations but not others is not involved here.

state pool character of the operation." *Id.* at 184. The court continued:

> "We reject I&M's fundamental proposition in this case that in order to prevail, the Federal Power Commission must do what I&M claims to be impossible, that is, to prove by either tracing or some other unnamed 'scientific and engineering proof' that out-of-state energy reaches the wholesale customers. We might recall that even in criminal cases, guilt beyond a reasonable doubt often can be established by circumstantial evidence." *Id.*

In *Arkansas Power & Light Co.* v. *FPC*, 368 F.2d 376 (8th Cir. 1966), the court said:

> "The Commission asserts, however, that the teachings of the Supreme Court clearly establish that where, as here, there is an integrated, interstate pool operation, jurisdiction may be proved without resort to tracing studies. We agree with the Commission and affirm.
>
> "We are not prepared to say that detailed tracing studies are a sine qua non to the conferral of federal jurisdiction where there exists an integrated, interstate 'pool assist' operation as in the present case." 368 F.2d at 379.

In *Public Service Company of Indiana* v. *FPC*, 375 F.2d 100 (7th Cir.), *cert. denied*, 387 U.S. 931 (1967), the court sustained the Commission's regulating rates charged by the company in sales to municipal and cooperative customers. The court described the company as operating entirely within Indiana, interconnected with six other public utilities at points within Indiana or at the state line. Three of these served areas outside Indiana.

The Commission had found that the company was interconnected with a single multi-state integrated power system. In fact, as the court found, it is "the same interstate network to which I&M and Arkansas Light & Power are interconnected." 375 F.2d at 103. *Cf. Arkansas Power & Light Co.* v. *FPC*, 368 F.2d 376 (8th Cir. 1966); *Indiana & Michigan Electric Co.* v. *FPC*, 365 F.2d 180 (7th Cir.), *cert. denied*, 385 U.S. 972 (1966).

The court continued:

> "Its participation in this pool by virtue of its interconnections, even though only for economy and emergency purposes, results in the introduction of a substantial amount of out-of-state energy into PSCI's system." 375 F.2d at 103.

In its footnote to this statement the court said:

> "The Commission rejected the contention that the net flow of energy into the system (0.1% of PSCI's total energy requirements) was controlling in determining the existence of out-of-state energy in the sales to the Municipals and REMCs [Cooperatives]. We think this was a permissible administrative interpretation of the Act, especially in view of the benefits accruing to PSCI under the pooling arrangement. *Cf.* Pennsylvania Water & Power Co. v. FPC, 343 U.S. 414 (1952). These benefits include increased reliability, reduced costs and reduction of its 'spinning reserves.'" 375 F.2d at 103 n. 4.

The court's opinion continued:

> "The proof in the record before us is sufficient to support an inference, to a reasonable scientific certainty, that interstate energy entered all of the sales in question and commingled with PSCI-generated energy." *Id.* at 103.

In *Cincinnati Gas & Electric Co.* v. *FPC*, 376 F.2d 506 (6th Cir.), *cert. denied*, 389 U.S. 842 (1967), the court sustained an order requiring the company and its affiliate to file with the Commission rate schedules covering their wholesale sales to eight municipalities. The two companies conceded that they were public utilities within the meaning of the Act. The court found that these companies were part of a coordinated and interconnected electric system, serving nine counties in Ohio, five in Kentucky, and one in Indiana; the system is connected with eight other utility companies in those three states. All of the companies are part of the Interconnected Systems Group, consisting of 140 utility systems in 32 states.[10]

The court said:

> "There can be no question but that interstate as well as intrastate generated electricity was commingled and was flowing through the CG&E system. This is enough to sustain the Commission's jurisdiction.
>
> "It would indeed be impossible to prove the source of electrical current supplied from a pool. It was not necessary for the Commission to do so." 376 F.2d at 508.

II. THE COURT BELOW ERRONEOUSLY CAST UPON THE COMMISSION A BURDEN OF PROOF WHICH IS NOT RELEVANT TO ITS JURISDICTION, AND WHICH CANNOT BE MET.

The court below, while rejecting the Commission's finding that electromagnetic unity of response of interconnected systems to loads in other states constituted interstate transmission of energy, never made very

[10] So is Florida Power Corporation, in our case, with which Florida Power & Light Co. is interconnected. (App. 287-88.)

clear just what proof it would recognize. Apparently, it demands proof that out-of-state energy can be traced, through systems interconnected in a power pool, to a specific customer.

A. The question of whether power originating in one of many interconnected generators can be traced to a specific consumer in another state is irrelevant.

As previously noted, the resolution of the question of whether Florida Power & Light Co. is a public utility within the meaning of the Act does not turn on whether it is engaged in making interstate sales, but on whether it owns facilities for interstate transmission.

Sixty-cycle alternating current changes its direction of flow 60 times a second. This change takes place throughout a system, with the speed of light. When two or more such systems are interconnected, this reversal takes place instantaneously throughout all of them, back and forth between all the generators in the system. Generation in the systems may be maintained in balance so that there is net transfer of energy in either direction, yet the electricity is pulsing between all generators in all systems, reversing its direction 60 times per second. The spinning generators in all systems are instantly available to effectuate a net flow of current if the load should increase in any segment of the interconnected systems. Thus the transmission lines which effectuate this interconnection are facilities for interstate transmission of energy, whether at any given moment, or during any given month, they are called upon to deliver a net amount of energy in either direction. They are "live wires"—the life in them pulses constantly from one end of the combined systems to the other. Two companies which mutually undertake to make stated quantities of reserve generating capacity available to one another for use in emergency or during

shut-downs for maintenance, thereby saving the duplicate investment that each would have to make in reserve capacity if it could not call upon that of the other, must maintain a transmission interconnection to effectuate this saving. Since such transmission facilities exist to make possible the transmission of energy in interstate commerce, whether or not energy is ever actually exchanged, they are facilities for interstate transmission of energy. After such a connection is established, the Commission's jurisdiction is not suspended in mid-air, awaiting the first emergency which occasions a net transfer of energy before being called into existence, and then vesting only upon proof that specific quantities from specific generators reached specific customers in another state. Such a "construct," to borrow the lower court's word, is not "in consonance with the reach and realities of modern interconnected systems," to borrow the Examiner's expression (App. 281).

In *Public Service Co. of Indiana* v. *FPC, supra,* the court quoted the Commission's opinion with approval:

> "As we observed in that case [Arkansas Power & Light Co.], it is an oversimplification to talk in terms of a flow of electricity from point to point in an integrated power network. Instead, generation from each source in the system contributes directly or indirectly, and to an ever varying extent, to the energy present in all parts of the system which are not isolated from out-of-state sources." 375 F.2d at 103 n. 6.

In *Arkansas Power & Light Co.* v. *FPC, supra,* the question was whether particular sales were sales in interstate commerce. The court said:

> "The Commission asserts, however, that the teachings of the Supreme Court clearly establish

that where, as here, there is an integrated, interstate pool operation, jurisdiction may be proved without resort to tracing studies. We agree with the Commission and affirm." 368 F.2d at 379.

* * * *

"While the Supreme Court has reiterated that 'federal jurisdiction was to follow the flow of electric energy, an engineering and scientific, rather than a legalistic or governmental test,' [*Connecticut Light and Power*] we do not construe this language as requiring the employment of tracing studies in every instance. While this standard was applied in Federal Power Commission v. Southern California Edison Co. (The *Colton* case), 376 U.S. 205 (1964), it seems clear that the Supreme Court there was not confronted with the highly integrated, interconnected pool operation that characterizes the Middle South System." *Id.*

* * * *

"Logic would seem to dictate that where the utility is a member of a combination of utilities and has continuous access to an integrated pool of interstate energy, the tracing of out-of-state energy is indeed difficult, burdensome, and perhaps impossible.". *Id.* at 382.

The Court quoted at length, with approval, from the Commission's opinion in the same case (34 F.P.C. at 751). In that opinion, as quoted by the Court, the Commission said, *inter alia*:

". . . the more complex and comprehensive the nature of the interstate network, the more unlikely it will be that any energy sources will be measurably identifiable. The use of tracing to disprove that a particular sale of a company which is part of an electrically integrated interstate system is in interstate commerce is a wholly unrealistic methodology which is irrelevant to present day power system technology." *Id.* at 382.

The simplest demonstration that tracing is irrelevant to the decision of the question whether certain transmission facilities are facilities for transmission of energy in interstate commerce is afforded by a proceeding to compel an interconnection under Section 202(b). Manifestly, until the case is won and an interconnection is made, no energy can be traced to the municipality seeking the interconnection. Yet, by the specific terms of Sections 201(b) and 202(b), the Commission has power to compel it if the transmission facilities with which the municipality seeks to interconnect are facilities *for* the transmission of energy in interstate commerce.

B. Such a burden of proof cannot be met, with respect to large interconnected systems.

The Presiding Examiner made it clear why tracing is impossible where power produced by several utilities is pooled.

> "The nature of electric energy is not clearly understood. It is sometimes described as a field of force or as a jostling motion of electrons. Where electric energy from two sources has combined, there is no way to identify a particular portion with a particular source. Electric energy is unlike a liquid, gas or solid, whose path can be traced by methods such as, dyeing one stream of the liquid, chemical analysis, tracing radioactive atoms.
>
> "In certain simple situations it can be proved that electric energy, or at least an undivided part of the whole, comes from a particular source. Thus a load of 100 kw, C, is supplied from a bus which receives 50 kw from each of two sources, A and B. Plainly the load is receiving electric energy from both A and B. The proof here is logical or mathematical. It does not involve knowledge or application of the physics of electric energy. That the

> energy at C comes from both A and B is both a sufficient and a necessary explanation. However, in modern electric systems such as those of Florida, such methods of logical analysis of the raw data are not applicable. There is too much commingling from different sources in the buses, and the systems are so complex that there are many possible sources which could account for the amount of electric energy at any point. In these circumstances, several explanations may be sufficient but none may possess the uniqueness necessary for proof." (App. 271-72.) (Examiner's footnote omitted.)

III. THE REGULATION OF THE FACILITIES OF AN INTERSTATE POWER GRID IS BEYOND THE CONSTITUTIONAL POWERS OF A SINGLE STATE. THE DECISION OF THE COURT BELOW WOULD RECREATE THE "ATTLEBORO GAP" BY CONSTRUING THE FEDERAL POWER ACT SO AS TO DENY THE FEDERAL POWER COMMISSION'S STATUTORY AUTHORITY TO REGULATE SUCH FACILITIES, EXCEPT ON PROOF THAT POWER PRODUCED BY A SPECIFIC GENERATOR CAN BE TRACED TO A SPECIFIC CUSTOMER, A TASK IMPOSSIBLE OF ACHIEVEMENT.

The Supreme Court said, in *Public Utilities Commission* v. *Attleboro Steam & Electric Co.*, 273 U.S. 83 90 (1927):

> "Plainly, however, the paramount interest in the interstate business carried on between the two companies is not local to either State, but is essentially national in character. The *rate* is therefore not subject to regulation by either of the two States in the guise of protection to their respective local interests; but, if such regulation is required it can only be attained by the exercise of the power vested in Congress." (Emphasis added.)

Substitute "interchange" for "rate" in the quotation, and we have the present case. Congress has exer-

cised the power vested in it, and did not intend to leave or create another Attleboro Gap, this time with respect to the subject of participation in interstate transmission grids.

In *United States* v. *Public Utilities Commission of California,* 345 U.S. 295, 308 (1953), the Court said: "Congress interpreted that case [Attleboro] as prohibiting state control of wholesale rates in interstate commerce for resale, and so armed the Federal Power Commission with precisely that power."

The Court continued:

> "Part II [of the Power Act] is a direct result of Attleboro. They are to be read together. The latter left no power in the states to regulate licensees' sales for resale in interstate commerce, while the former established federal jurisdiction over such sales." *Id.* at 311.

In *FPC* v. *Southern California Edison Co., supra* (The *Colton* case), the Court, noting that the Company was concededly a public utility within the meaning of Section 201(e) of the Federal Power Act, had before it the question of whether a sale at wholesale to the City of Colton was a sale in interstate commerce. The resolution of that question turned on whether power received into the Company's lines at Hoover and Davis Dams, outside California, reached Colton, a city in California. The Commission had held that it did, basing this finding on evidence that power from this source could be traced to Colton. The Court of Appeals for the Ninth Circuit set aside the F.P.C. order (310 F.2d 784), but the Supreme Court reversed. Holding that there was substantial evidence to support the Commission's determination that out-of-state energy

reached Colton, the Court rejected the Court of Appeals' construction of the proviso of Section 201(a) "as requiring an appraisal in each case of the impact of the particular sale." The Supreme Court said:

> "In short, our decisions have squarely rejected the view of the Court of Appeals that the scope of FPC jurisdiction over interstate sales of gas or electricity at wholesale is to be determined by a case-by-case analysis of the impact of state regulation upon the national interest. Rather, Congress meant to draw a bright line easily ascertained, between state and federal jurisdiction, making unnecessary such case-by-case analysis. This was done in the Power Act by making FPC jurisdiction plenary and extending it to all wholesale sales except those which Congress has made explicitly subject to regulation by the States." 376 U.S. at 215-16.

We say that this conclusion inescapably applies to facilities for transmission in interstate commerce as to facilities for sale of electric energy at wholesale in interstate commerce, these being the twin criteria for Commission jurisdiction stated in Section 201(b).

The Court bracketed those twin criteria of the Act in this fashion:

> "The premise was that constitutional limitations upon state regulatory power made federal regulation essential if major aspects of interstate transmission and sale were not to go unregulated." *Id.* at 213.

In *Jersey Central,* the line did not cross state borders and since it was wholly within one state it was contended that the line was used for intrastate transmission and that the Act did not apply although the line

was used to transmit power in its course of exportation from the state. The Court denied this contention, and said: "Subsections (a) and (b) [of Sec. 201] show the intent to regulate such transactions as are beyond state power under the Attleboro Steam & Electric Case, 273 U.S. 83. . . ." 319 U.S. at 70-71. The Court continued:

> "It is impossible for us to conclude that this definition [Sec. 201(e)] means less than it says and applies only to the energy at the instant it crosses the state line and so only to the facilities which cross the line and only to the company which owns the facilities which cross the line. The purpose of this act was primarily to regulate the rates and charges of the interstate energy. If intervening companies might purchase from producers in the state of production, free of federal control, cost would be fixed prior to the incidence of federal regulation and federal rate control would be substantially impaired, if not rendered futile." *Id.* at 71-72.

Essential elements of regulation of an interstate power pool, other than rates and charges, are "beyond the state power under the Attleboro Steam & Electric Co. Case. . . ." *Id.* These include a myriad of technical matters which must be resolved to make possible the integration of power systems in many states to prevent blackouts in any one of them.

Congress surely contemplated this when, in Section 202(a), it gave the Commission these prescient instructions:

> "(a) For the purpose of assuring an abundant supply of electric energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources, the Commission is empowered

> and directed to divide the country into regional districts for the voluntary interconnection and coordination of facilities for the generation, transmission, and sale of electric energy, and it may at any time thereafter, upon its own motion or upon application, make such modifications thereof as in its judgment will promote the public interest. Each such district shall embrace an area which, in the judgment of the Commission, can economically be served by such interconnected and coordinated electric facilities. It shall be the duty of the Commission to promote and encourage such interconnection and coordination within each such district and between such districts. . . ."

Additionally Congress, in Section 202(b), authorized the Federal Power Commission to compel interconnections of public utilities to accomplish that purpose of "assuring an abundant supply of electric energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources."

Congress intended to give the Commission the power to carry out those instructions.

CONCLUSION

The larger the interstate pool, the greater the need for federal regulation. But, the larger the pool (here systems in 32 states are interconnected), the greater the difficulty of tracing energy from a specific generator to a specific customer. The court below, however, apparently believes that energy must be so traced to establish the interconnected systems as public utilities subject to regulation under the Federal Power Act. So, on the lower court's reasoning, the greater the need for federal regulation, the greater the obstacle

to establishing it. We think this is an erroneous construction of the Federal Power Act. The Examiner and the Commission made the sound construction: that the electromagnetic unity of response of all interconnected systems to all loads on all systems ipso facto constitutes interstate transmission of electric energy, without legal necessity for performance of the engineeringly impossible task of tracing it from each generator to each user. This being so, the Act applies to facilities for effectuating such transmission under Section 201 (b), and the owners or operators of such facilities are public utilities within the meaning of Section 201(e).

The judgment of the Court of Appeals should be reversed, and the case remanded to that court with instructions to affirm the opinion and order of the Federal Power Commission.

Respectfully submitted,

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May 21, 1971

APPENDIX

STATUTES

Federal Power Act § 201(a), 16 U.S.C. § 824(a) (1964)

(a) It is declared that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and that Federal regulation of matters relating to generation to the extent provided in sections 824-825r of this title and of that part of such business which consists of the transmission of electric energy in interstate commerce and the sale of such energy at wholesale in interstate commerce is necessary in the public interest, such Federal regulation, however, to extend only to those matters which are not subject to regulation by the States.

Federal Power Act § 201(b), 16 U.S.C. 824(b) (1964)

(b) The provisions of sections 824-824h of this title shall apply to the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce, but shall not apply to any other sale of electric energy or deprive a State or State commission of its lawful authority now exercised over the exportation of hydroelectric energy which is transmitted across a State line. The Commission shall have jurisdiction over all facilities for such transmission or sale of electric energy, but shall not have jurisdiction, except as specifically provided in said sections, over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter.

Federal Power Act § 201(e), 16 U.S.C. 824(e) (1964)

(e) The term "public utility" when used in sections 824-825r of this title means any person who owns or operates facilities subject to the jurisdiction of the Commission under Sections 824-824h of this title.

Federal Power Act § 202(b), 16 U.S.C. 824a(b) (1964)

(b) Whenever the Commission, upon application of any State commission or of any person engaged in the transmission or sale of electric energy, and after notice to each State commission and public utility affected and after opportunity for hearing, finds such action necessary or appropriate in the public interest it may by order direct a public utility (if the Commission finds that no undue burden will be placed upon such public utility thereby) to establish physical connection of its transmission facilities with the facilities of one or more other persons engaged in the transmission or sale of electric energy, to sell energy to or exchange energy with such persons: *Provided,* That the Commission shall have no authority to compel the enlargement of generating facilities for such purposes, nor to compel such public utility to sell or exchange energy when to do so would impair its ability to render adequate service to its customers. The Commission may prescribe the terms and conditions of the arrangement to be made between the persons affected by any such order, including the apportionment of cost between them and the compensation or reimbursement reasonably due to any of them.

Federal Power Act § 205, 16 U.S.C. 824d (1964)

(a) All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.

(b) No public utility shall, with respect to any transmission or sale subject to the jurisdiction of the Commission, (1) make or grant any undue preference or advantage to any person or subject any person to any undue prejudice or disadvantage, or (2) maintain any unreasonable differ-

ence in rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.

(c) Under such rules and regulations as the Commission may prescribe, every public utility shall file with the Commission, within such time and in such form as the Commission may designate, and shall keep open in convenient form and place for public inspection schedules showing all rates and charges for any transmission or sale subject to the jurisdiction of the Commission, and the classifications, practices, and regulations affecting such rates and charges, together with all contracts which in any manner affect or relate to such rates, charges, classifications, and services.

(d) Unless the Commission otherwise orders, no change shall be made by any public utility in any such rate, charge, classification, or service, or in any rule, regulation, or contract relating thereto, except after thirty days' notice to the Commission and to the public. Such notice shall be given by filing with the Commission and keeping open for public inspection new schedules stating plainly the change or changes to be made in the schedule or schedules then in force and the time when the change or changes will go into effect. The Commission, for good cause shown, may allow changes to take effect without requiring the thirty days' notice herein provided for by an order specifying the changes so to be made and the time when they shall take effect and the manner in which they shall be filed and published.

(e) Whenever any such new schedule is filed the Commission shall have authority, either upon complaint or upon its own initiative without complaint, at once, and, if it so orders, without answer or formal pleading by the public utility, but upon reasonable notice, to enter upon a hearing concerning the lawfulness of such rate,

charge, classification, or service; and, pending such hearing and the decision thereon, the Commission, upon filing with such schedules and delivering to the public utility affected thereby a statement in writing of its reasons for such suspension, may suspend the operation of such schedule and defer the use of such rate, charge, classification, or service, but not for a longer period than five months beyond the time when it would otherwise go into effect; and after full hearings, either completed before or after the rate, charge, classification, or service goes into effect, the Commission may make such orders with reference thereto as would be proper in a proceeding initiated after it had become effective. If the proceeding has not been concluded and an order made at the expiration of such five months, the proposed change of rate, charge, classification, or service shall go into effect at the end of such period, but in case of a proposed increased rate or charge, the Commission may by order require the interested public utility or public utilities to keep accurate account in detail of all amounts received by reason of such increase, specifying by whom and in whose behalf such amounts are paid, and upon completion of the hearing and decision may by further order require such public utility or public utilities to refund, with interest, to the persons in whose behalf such amounts were paid, such portion of such increased rates or charges as by its decision shall be found not justified. At any hearing involving a rate or charge sought to be increased, the burden of proof to show that the increased rate or charge is just and reasonable shall be upon the public utility, and the Commission shall give to the hearing and decision of such questions preference over other questions pending before it and decide the same as speedily as possible.

Federal Power Act § 206, 16 U.S.C. 824e (1964)

(a) Whenever the Commission, after a hearing had upon its own motion or upon complaint, shall find that any rate, charge, or classification, demanded, observed, charged, or collected by any public utility for any transmission or sale subject to the jurisdiction of the Commission, or that any rule, regulation, practice, or contract affecting such rate, charge, or classification is unjust, unreasonable, unduly discriminatory or preferential, the Commission shall determine the just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order.

(b) The Commission upon its own motion, or upon the request of any State commission whenever it can do so without prejudice to the efficient and proper conduct of its affairs, may investigate and determine the cost of the production or transmission of electric energy by means of facilities under the jurisdiction of the Commission in cases where the Commission has no authority to establish a rate governing the sale of such energy.

Federal Power Act § 313(b), 16 U.S.C. 825l(b) (1964)

(b) Any party to a proceeding under this chapter aggrieved by an order issued by the Commission in such proceeding may obtain a review of such order in the United States Court of Appeals for any circuit wherein the licensee or public utility to which the order relates is located or has its principal place of business, or in the United States Court of Appeals for the District of Columbia, by filing in such court, within sixty days after the order of the Commission upon the application for rehearing, a written petition praying that the order of the Commission be modified or set aside in whole or in part. A copy of such petition shall forthwith be transmitted by the clerk of the court to any member of the Commission and thereupon the Com-

mission shall file with the court the record upon which the order complained of was entered, as provided in section 2112 of Title 28. Upon the filing of such petition such court shall have jurisdiction, which upon the filing of the record with it shall be exclusive, to affirm, modify, or set aside such order in whole or in part. No objection to the order of the Commission shall be considered by the court unless such objection shall have been urged before the Commission in the application for rehearing unless there is reasonable ground for failure so to do. The finding of the Commission as to the facts, if supported by substantial evidence, shall be conclusive. If any party shall apply to the court for leave to adduce additional evidence, and shall show to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for failure to adduce such evidence in the proceedings before the Commission, the court may order such additional evidence to be taken before the Commission and to be adduced upon the hearing in such manner and upon such terms and conditions as to the court may seem proper. The Commission may modify its findings as to the facts by reason of the additional evidence so taken, and it shall file with the court such modified or new findings which, if supported by substantial evidence, shall be conclusive, and its recommendation, if any, for the modification or setting aside of the original order. The judgment and decree of the court, affirming, modifying, or setting aside, in whole or in part, any such order of the Commission, shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in sections 346 and 347 of Title 28.